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REPORT

CD NO.

STAT

COUNTRY	USSR	DATE OF INFORMATION	1946
SUBJECT	Scientific research		
HOW PUBLISHED	Periodicals	DATE DIST.	11 January 1949
WHERE PUBLISHED	USSR	NO. OF PAGES	1
DATE PUBLISHED	1946		
LANGUAGE	Russian	SUPPLEMENT TO REPORT NO.	

THIS IS UNEVALUATED INFORMATION

SOURCE Documentary as indicated. (Information requested.)

RECENTLY PUBLISHED RESEARCH OF THE INSTITUTE OF PHYSICAL PROBLEMS, ACADEMY OF SCIENCES USSR

"Crystallization of Solutions," B. Peshkov, Inst Phys Problems, Acad Sci USSR

"Acta Physicochimica" Vol 21, 1946, pp 109-34

Crystallization from the systems benzene-toluene, Hg-Zn, and KNO_3-H_2O was followed. The apparatus and experimental procedure are described in detail. Measurements were made with a thermocouple accurately calibrated from -160° to 20°. Data for the three systems are tabulated. A eutectic close to 6.62% benzene is shown at -99°. Such a eutectic at 0.56% of Zn and -42° was observed, and for the third system the eutectic is at 10.2% KNO_3 at -2.85°. Examination of crystals from photomicrographs taken of this system without Nicol prisms and with crossed Nicols gave information that shows the role played by diffusion during crystallization. A more detailed discussion is given in a thesis by Peshkov (1944) in the Institute of Physical Problems, Academy of Sciences USSR. The article attempts by the theory of diffusion to show the order of departure of real processes from equilibrium.

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